

WHAT IS CLAIMED IS:

1. A method for supporting pilot boost to the uplink dedicated channels in the Wideband Code Division Multiple Access system comprising steps of:

5 transmitting E-TFCI to a Node B by a UE before transmitting a E-DCH corresponding to the E-TFCI;

adjusting an uplink pilot power boosting amplitude by the UE according to the E-TFCI; and

10 performing a uplink inner loop power control by the Node B according to a measured SIR, a target preset by the inner loop power control and a pilot boost amplitude resulted from the E-TFCI.

2. The method according to Claim 1, wherein the UE transmits a D-TFCI and a DCH corresponding to the D-TFCI synchronously.

15 3. The method according to Claim 1, wherein the timing relationship on transmitting the E-TFCI in advance must satisfy that the ending time of E-TFCI's TTI must be earlier than the starting time of TTI of the E-DCH corresponding to the E-TFCI.

20 4. The method according to Claim 1, wherein when the uplink inner loop power control is performed by the Node B, if  $SIR_{mea} < SIR_{target} + \Delta P_{pilot}$ , the Node B sends a TPC UP command to demand the UE to increase the transmitting power; otherwise, it sends a TPC DOWN command to demand the UE to decrease the transmitting power.

5. The method according to Claim 1, wherein the UE calculates a transmitting power of the pilot according to the E-TFCI and equation below

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$$P_{pilot} = P_c + \Delta P_{pilot}$$

6. The method according to Claim 1, wherein: a RNC notifies the Node B through a Iub signaling of the pilot power boosting amplitude corresponding to a reference E-TFCI, and notifies the UE through a RRC signaling of the pilot power boosting amplitude corresponding to the reference E-TFCI.

30 7. The method according to Claim 1, wherein the Node B and the UE calculate the pilot power boosting amplitudes corresponding to other E-TFCIs according to that corresponding to the reference E-TFCI.

8. The method according to Claim 1, wherein the UE transmits the D-TFCI to the Node B before the transmission of the DCH corresponding to the D-TFCI.

9. The method according to Claim 1, wherein the UE transmits the TFCI which is generated by encoding the D-TFCI and the E-TFCI before the transmission of the E-DCH corresponding to the E-TFCI.